

GENERAL SIGNIFICANCE OF S.I.E. COMPILATIONS

Compilation of data from Science Information Exchange (S.I.E.) are subject to some inherent limitations and exceptions. Wherever possible, S.I.E. will note and estimate the significance of these conditions as they apply to each compilation. There are also the general limitations noted below that should be recognized in order to avoid possible misinterpretation, confusion, and contradictory conclusions, when comparing these data with other sources.

S.I.E. is an inventory of research tasks, where "task" means a small uniquely identified unit of research work.

The dollar values recorded by S.I.E. are intended only to show the annual level of effort (or support) for each individual task.

Sums, totals, and compilations of S.I.E.'s research task records are not designed to reflect budget data. Therefore, S.I.E. dollars sums and totals cannot be reconciled with budgets that are essentially inventories of total dollars. The latter allocates all R.&D. dollars to specified categories. S.I.E. counts only those dollars that are annually allocated to a selected list of items identified as basic and applied research tasks. This does not include many categories of overhead, general support, construction, fellowships, etc.

S.I.E. dollar sums and totals can be used as a comparative *index of relative emphasis and distribution* among agencies, or recipients, or geographical areas, of subject fields, etc., for one or a series of years, if the inherent limitations and exceptions are clearly recognized in each case and applied to the derivation of conclusions. For example:

- (1) S.I.E. receives no research records classified for national security.
- (2) S.I.E. receives no dollar values for most inhouse research tasks.
- (3) At this time, S.I.E. receives few records of development projects and programs.

In comparing S.I.E. data with other sources, it should be noted that many projects and tasks are on the borderline between applied research, advanced technology, and development. The decision for inclusion or exclusion is arbitrary, and may differ among agencies, and by individuals. These may total fairly large sums, and corresponding discrepancies.

(4) S.I.E. focuses on the research task, *per se*. Contracts, grants, and funds allocated to general research support, such as interdisciplinary laboratories, institutional grants, etc. that are not related to specific research tasks may not come to S.I.E. or may be accounted differently.

(5) S.I.E. registers research tasks according to the fiscal year in which the research began. This may or may not agree with the fiscal year in which the funds were budgeted, committed, or obligated.

(6) S.I.E. records the *annual cost* (level of effort) for a grant or contract that may extend over several years. Some agencies assign the budget cost of a single 3-year grant to one fiscal year, in compiling their reports.

(7) S.I.E. can only report on tasks that have been registered by the participating Agencies. All Federal Agencies do not register their entire programs so that S.I.E. can not guarantee complete coverage for any given program, subject, or agency.

(8) The S.I.E. collection has grown rapidly over the years as agencies have initiated and/or increased their registration. Comparative trends over a series of years in some categories may reflect the growth of the Exchange rather than changing emphasis in the research area or program.

(9) With any compilation, S.I.E. will note and estimate the significance of these limitations, as far as possible, if requested to do so.

Dr. BUCKLEY. Dr. Hornig's statement pointed out the existence of this committee and the reason for it. I would like to start with a history of the actions the subcommittee has taken.

We spent some time discussing in the fall how we might best get at an understanding of what the pollution research program in the Federal Government was. One of the suggestions, and a useful one, was that we query the Department of Defense Documentation Center, and we did. This is one of five volumes of this size which describes